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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,799	04/04/2006	Michael Anthony Barrett	M03B141	4269
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The BOC Group, Inc. 575 MOUNTAIN AVENUE MURRAY HILL, NJ 07974-2082				
EXAMINER				
NIESZ, JASON KAROL				
ART UNIT		PAPER NUMBER		
3751				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/541,799

Applicant(s)

BARRETT, MICHAEL ANTHONY

Examiner

JASON K. NIESZ

Art Unit

3751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-11 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 11 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/IS/A)
Paper No(s)/Mail Date 01/11/2005 and 11/13/2006
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements (IDS) submitted on 11/13/2006 and 07/11/2005 were considered by the examiner.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 3, 4, 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shipachev et al. (US Patent 6,378,570 B1) in view of Knopf (GB 958512)..

In Re claim 1 with reference to Figure 3 Shipachev discloses a method of filling a gas capsule comprising a hollow body portion (1) and a cap (5) including a stem (2) with a filling orifice (6). Shipachev discloses the method of providing within the capsule prior to the assembly of the body portion and the cap portion a stopper member (3). Shipachev further discloses the step of filling the capsule with gas under pressure, causing the stopper member to adopt a position between the body of the capsule and the filling orifice, and releasing the pressure to force the stopper member into gas tight engagement with the stem portion (2) of the bottle.

Shipachev doesn't disclose a portion of the cap member defining a passage to the orifice of the capsule.

In Figure 2 Knopf discloses a cap portion (1) defining a passage to the orifice of the capsule.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the cap portion from the Knopf reference in place of the stem portion from the Shipachev reference, in order to allow the manufacturer to select from different orifice sizes while using a standard capsule. Furthermore, it would have been obvious to use only the cap body (1) from Knopf and not the catch element (9) in the combined method as the inclusion of catch element (9) would prevent the Shipachev stopper, which moves freely within the capsule (see Figure 1) from seating properly during sealing.

The examiner notes that the use of the cap from Knopf during the method from Shipachev necessarily results in the stopper member from Shipachev being held by gas pressure in gas tight arrangement with the cap portion. Furthermore, the plug portion (Shipachev Figure 3, Item 5) could still be used in the same manner in the modified method.

In Re claim 2 Shipachev discloses a stopper member formed as a ball of resilient material (Column 2, lines 39-40). Furthermore in Figure 2 Knopf discloses a passage comprising a bore (4) having a constricted portion of reducing diameter. It can be clearly noted that the use of the cap from Knopf in the Shipachev method results in the ball being forced into said bore and trapped in fluid tight engagement with said constricted portion.

In Re claim 3 in Figure 2 Knopf discloses cap portion comprising a bore formed with a first part of wider diameter (6, 4) and a second part of narrower diameter (2) and a shoulder (7) joining the two parts and forming a seating arrangement for said ball.

In Re claim 4 in Figure 2 Knopf discloses a tapered portion of said bore (6) extending between wider and narrower parts. It should be noted that the use of the Shipachev method with the cap from Knopf results in the resilient ball being forced along said tapered part and compressed to a point at which it becomes trapped within the bore (See Figure 2 in Knopf).

In Re claim 6 Shipachev discloses the claimed invention except for forming said ball of silicone rubber. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use silicone rubber to form the ball, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

In Re claim 11 Shipachev discloses the step of orienting said capsule with the filling orifice in a downward position in order to cause said stopper member to obstruct the path of gas (Column 3, lines 24-30). The examiner notes that although gas pressure is listed as the means for propelling the ball into the orifice, gravity is obviously also influencing it.

3. Claims 5, 7, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shipachev in view of Knopf in further view of Garrett (US Patent 7,013,617 B2).

In Re claim 5 Shipachev in view of Knopf as applied to claim 1 discloses all the limitations, but doesn't disclose the use of an aluminum body portion for said capsule.

Garrett discloses a method of filling and sealing using an aluminum capsule (Column 3, line 4).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use aluminum to manufacture the body and cap portion of the invention, as taught by Garrett, in order to take benefit from the well known advantages of aluminum (light weight, easy machining).

In Re claim 7 Shipachev in view of Knopf as applied to claim 1 above discloses all the limitations but doesn't disclose the step of deforming said bore inwardly after the passage of said ball.

With reference to Figures 1-3 Garrett discloses a method of sealing a capsule in which a crimp is made in the stem of a capsule at a location distant from the filling opening followed by a second crimp at the location of the filling orifice followed by a weld at the second crimp.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Shipachev in view of Knopf reference with the steps of forming a first crimp distant from the filling orifice and a second crimp at the filling orifice and a weld at the filling orifice, in order to provide a more secure seal than that provided by the Shipachev method. Furthermore, it can be clearly seen that said first

crimp, being made at a location spaced from the filling orifice, would trap the ball from Shipachev in within the stem of the cap from Knopf.

In Re claim 8 Shipachev in view of Knopf in further view of Garrett as applied to claim 7 above discloses the step of welding the orifice closed.

In Re claim 9 Shipachev in view of Knopf in further view of Garrett as applied to claim 7 above discloses a filling and sealing method wherein a crimp is applied to the stem of a filling capsule immediately adjacent the filling orifice in order to flatten and close the latter and an additional crimp is applied to the stem at a point distant the filling orifice. Furthermore Garrett discloses welding the orifice shut with a laser (Column 3, lines 15-35).

Garrett doesn't disclose the specific method of crimping said stem, or the step of releasing the pair of crimping jaws located at the filling orifice and performing the welding operation whilst the other pair of crimping jaws remains attached.

In the background of the invention Garrett discloses the use of metal jaws to perform a crimping action (Column 1, lines 54 and 55). Garrett further discloses the step of removing a portion of said jaws in order to free a portion of passageway to be welded while at the same time leaving the remaining portion of said jaws attached to hold the piece in place (Column 1, lines 47-67, Column 2, lines 1-4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use crimping jaws to perform the crimping operation as specified in Garrett. Furthermore, it would have been obvious to release the set of said

jaws fixed about the filling orifice to allow a weld to be made while retaining the capsule in place with the part with the other crimping jaws.

4. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shipachev in view of Knopf in further view of Chusserath et al. (US Patent 5,634,500).

In Re claim 10 Shipachev in view of Knopf as applied to claim 1 above discloses all the limitations but doesn't disclose the step of flushing the capsule with a gas then evacuating it prior to filling.

Chusserath discloses a method for bottling a liquid comprising purging the container with an inert gas which is then evacuated prior to filling (abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Shipachev in view of Knopf method with the flush and evacuation step from Chusserath, in order that the capsule should be filled only with the desired gas containing no contaminants. Furthermore, it would have been obvious to hold said capsule in an upright orientation during this step to prevent the stopper member from lodging in the stem during the evacuation step.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lemoine (US Patent 1,632,447) discloses a device for closing a compressed gas cylinder comprising a cap portion which defines a gas passage.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON K. NIESZ whose telephone number is (571)270-3920. The examiner can normally be reached on mon-fri 9-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason K Niesz
Examiner
Art Unit 3751

/Timothy Lewis Maust/
for Gregory Huson, SPE of Art Unit 3751

